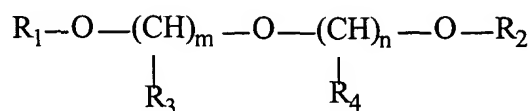


We claim:

1) A catalytic composition of matter useful in producing foam products which comprises:

5 a) a compound of the formula:



wherein **R₁**, **R₂**, **R₃**, and **R₄** are each independently selected from the group consisting of H, methyl, ethyl, propyl, butyl, and pentyl, and any isomers of the foregoing; and **m** and **n** are each independently whole integers between 1 and 4 inclusive;

b) at least one amino compound; and

c) a reaction product formed from the reaction between formic acid and an alkaline substance;

wherein said catalytic composition is homogeneous.

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2) A composition according to claim 1 wherein said reaction product is present in an effective catalytic amount for promoting the reaction between a hydroxy group of an organic polyol and an isocyanate group of an organic isocyanate contained in a mixture of polyol and isocyanate to which said catalytic composition is caused to be contacted.

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- 3) A composition according to claim 1 wherein said alkaline substance includes a hydroxide of a chemical species selected from the group consisting of: alkali metals, alkaline earth metals, transition metals, metals of Group IV of the Periodic Table of Elements, and substituted or unsubstituted ammonium ions.

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- 4) A composition according to claim 1 wherein said alkaline substance includes an alkoxide of a chemical species selected from the group consisting of: alkali metals, alkaline earth metals, transition metals, metals of Group IV of the Periodic Table of Elements and alkyl-substituted or unsubstituted ammonium ions.

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- 5) A composition according to claim 1 wherein said alkaline substance includes a cation selected from the group consisting of: monovalent metal cations, and di-valent metal cations, tetravalent metal cations, and alkyl-substituted or unsubstituted ammonium ions.

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- 6) A composition according to claim 5 wherein said monovalent metal cation is selected from the group consisting of: sodium, potassium, rubidium, and cesium.

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7) A catalytic composition of matter useful in producing foam products which comprises:

- 5 a) a compound selected from the group consisting of: ethylene glycol, diethylene glycol, propylene glycol, ethylene glycol monomethyl ether, dipropylene glycol, and triethylene glycol;
- b) at least one amino compound; and
- c) a reaction product formed from the reaction between formic acid and an alkaline substance;

wherein said catalytic composition is homogeneous.

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8) A composition according to claim 1 wherein said amino compound is selected from the group consisting of: primary amines, secondary amines, tertiary amines, and Mannich condensates.

- 15 9) A composition according to claim 8 wherein said amino compound is a Mannich condensate and said Mannich condensate is formed from the condensation of an alkyl phenol, formaldehyde, and an amino compound having at least one active hydrogen atom attached to a nitrogen atom.

- 20 10) The composition according to claim 9 wherein said amino compound is selected from the group consisting of: primary amines, secondary amines, and amino acids.

- 11) The composition according to claim 10 wherein said amino acid is selected from the group consisting of: lysine, aspartic acid, sarcosine, cysteine, proline, phenylalanine, glycine, and serine.
- 5 12) The composition according to claim 9 wherein said alkyl phenol includes at least one alkyl group having between 2 and 20 carbon atoms bonded to the benzene ring.
- 13) The composition according to claim 9 wherein the alkyl phenol is a mono-alkylated or di-alkylated phenol which contains at least one alkyl group selected from the group consisting of: methyl, ethyl, propyl, butyl, pentyl, hexyl, heptyl, octyl, nonyl, decyl, and any structural isomers of the foregoing bonded to the benzene ring of said phenol.
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- 14) The composition according to claim 1 wherein said acidic organic species is formic acid.
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- 15) A process for forming a foam product which comprises the steps of:
- a) providing an organic isocyanate;
 - b) providing a polyol; and
 - c) contacting at least one of said polyol or said organic isocyanate with a
- 20 composition according to claim 1.
- 16) The process according to claim 15 wherein said foam product comprises at least one foam selected from the group consisting of: polyisocyanurate foam and polyurethane foam.

17) The process according to claim 15 wherein said polyol is selected from the group of polyether polyols, polyester polyols, or any mixture thereof.

5 18) The process according to claim 15 wherein said isocyanate is selected from the group consisting of: 4,4'-diphenylmethane diisocyanate, 2,4'-diphenylmethane diisocyanate, 2,2'-diphenylmethane diisocyanate, toluene diisocyanate, or a polymerized form of any of the foregoing.

10 19) A foam product produced in accordance with claim 15 wherein said foam is selected from the group consisting of: polyisocyanurate foams and polyurethane foams.

20) A molded article comprising a foam of claim 19.

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